The Ulster Medical Journal, Volume 58, No. 1, pp. 100–102, April 1989.

Case report

Compulsive jogging: exercise dependence and associated disorder of eating

H A Lyons, R Cromey

Accepted 31 January 1989.

A number of patients have been reported who have developed features of an eating disorder following a desire to increase their level of fitness.

CASE HISTORY

A 42-year-old male school teacher was referred to the psychiatric out-patient clinic by his general practitioner at the request of his brother who had become concerned by the patient's obsession with fitness and also his marked loss of weight. His weight had dropped from 218 lb to 112 lb in the space of two years. He had always been keen on sport, having played a number of games at a national level. He had also been an enthusiastic golfer from the age of six, at one stage reducing his handicap to two. In 1985 he decided suddenly to improve his physical health, having become markedly overweight at 218 lb and also because of a strong family history of ischaemic heart disease. The patient put himself on a strict diet and although he continued to eat mixed foodstuffs he limited his energy intake to 800–1,000 calories per day. He also took up regular running and ran at least five miles a day followed by one hour in a sauna. Running became his priority in life and as soon as his teaching duties finished he set out jogging, followed by a sauna, and later in the evening he would referee basketball. His weight fell to 112 lb which is considerably below the minimum desirable weight for his height of 5 ft 10 ins (144 lb), or the average UK weight for height and age (176 lb).[1] He was pleased with this loss of weight and did not consider himself to be abnormally thin.

As a result, his work as a teacher and, in particular, his marriage suffered. During the weekends he would referee hockey matches, but he would also indulge in binges of eating and taking excess alcohol. At these times he would put on up to 7 lb in weight, which led to marked feelings of guilt. The increase in weight would be quickly controlled by renewed strenuous dieting, exercise and spending time in the sauna. He complained of feeling depressed at times and became bored with his work and dissatisfied with his home life. He had loss of libido. When running he felt elated. His sleep pattern was disturbed, with both initial insomnia and also some early morning wakening. He became obsessed with his performance as a runner.

Purdysburn Hospital, Saintfield Road, Belfast BT8 8BH.
H A Lyons, MB, FRCPsych, FRCP(I), DPM, Consultant Psychiatrist.
Skegoneill Health Centre, Belfast BT15 3LL.
R Cromey, MB, MRCGP, DObst RCOG, General Practitioner.
Correspondence to Dr Lyons.

He had earlier refused to turn up when a psychiatric out-patient appointment was made, and, when he eventually attended, accompanied by his brother, he showed some resentment about being brought to see a psychiatrist. He felt his actions were reasonable but admitted that his behaviour was putting strain on his marriage, partly due to the fact that he spent so little time at home with his wife and three children. At this attendance he looked thin, but was neat and tidy in his appearance. He appeared depressed with a constant worried and drawn expression on his face. He responded slowly to questions and demonstrated a flat affect with little variation in his speech.

He was seen six times as an out-patient over a three-month period and a number of joint interviews were carried out with the patient and his wife. Several psychogenic factors emerged and were discussed, such as his poliomyelitis as a child, his marital relationship (including long-standing sexual problems), his loss of ability to play certain sports competitively and his disappointment that his son was not successful at sport.

Although he continued to run he was able to do this in a more controlled fashion. His marital relationship improved and he spent more time with his wife and children and his weight increased to about 140 lb. Some clinical features initially were suggestive of a depressive illness, but in subsequent interviews any depression was considered to be reactive to the whole situation and drug therapy was not used. It was considered important not to stop running as this might lead to an increase in his depression.

DISCUSSION

Morgan described eight cases of 'running addiction' where commitment to running assumed a higher priority than commitment to work, family, interpersonal relations or medical advice.[2] A number of authors have suggested a similarity between exercise dependence, anorexia nervosa and bulimia nervosa. Katz reported two cases very similar to this patient, who developed features of anorexia nervosa associated with bingeing and vomiting following marked increase in exercise and weight loss.[3] Yates et al described three cases who were considered to be 'obligatory runners', and who had many features in common with anorexia nervosa, such as family background, socioeconomic class, personality factors with inhibition of anger, extraordinary high self-expectation, tolerance of physical discomfort, denial of potentially serious debility and a tendency towards depression.[4] Chalmers et al discussed a 30-year-old woman who developed anorexia nervosa which had presented initially as morbid exercising.[5] In their study of obligatory running and anorexia nervosa Blumenthal et al attempted to assess the similarity between 'obligatory running' and anorexia nervosa and concluded that the runners do not suffer from the same degree of psychopathology as do patients with anorexia nervosa.[6] Veale stated that exercise can become compulsive behaviour and harmful to an individual and lists a number of features present in patients suffering from 'exercise dependence' and commented on the similarity between these and other forms of dependency.[7]

In the present case, it seemed entirely appropriate for an overweight man of 42 to reduce his weight and increase his fitness, especially with the family history of ischaemic heart disease. It became abnormal behaviour because of excessive loss of weight, the amount of time he spent running and his preoccupation with energy intake, bingeing at the weekends with associated guilt feelings, the detrimental effect on his work and marital and family life, his feeling of depression when not running and his lack of insight into these problems.

In the past 20 years or so, jogging has become a fascination for a large number of people, and over the same period anorexia nervosa, previously thought to be a rare disorder, has increased to such an extent that it is now regarded as a public health problem. Is excessive running in the male an analogue of anorexia nervosa in the female? It has been suggested that exercise can play a role in contributing to an eating disorder via several routes, perhaps the most obvious of which is that exercise automatically causes increased energy expenditure and therefore weight loss, unless there is increased food intake.[2] Mood is also enhanced consequent to exercise which may be related to an elevation in endorphin production or opioid levels in the central nervous system. Exercise dependence is most likely to present at a sports clinic or casualty department as persistent physical injury, and it is important that this condition should be diagnosed to prevent continued exercise despite injury or illness.[7] Although there are many obvious benefits in a general increase in health awareness and fitness in the population, some few people develop problems with excessive exercise.

REFERENCES

1. Knight I, Elridge J. The heights and weights of adults in Great Britain. London: HMSO, 1984; 25-36.
2. Morgan WP. Negative addiction in runners. *Phys Sports Med* 1979; **7**: 57-70.
3. Katz JL. Long distance running, anorexia and bulimia. A report of two cases. *Compr Psychiatry* 1986; **27**: 74-8.
4. Yates A, Leehey K, Shisslak CM. Running, an analogue of anorexia? *N Engl J Med* 1982; **308**: 251-5.
5. Chalmers J, Catalan J, Day A, Fairburn C. Anorexia nervosa presenting as morbid exercising. *Lancet* 1985; **1**: 286-7.
6. Blumenthal JA, O'Toole LC, Chang JL. Is running an analogue of anorexia nervosa? *JAMA* 1984; **252**: 520-3.
7. Veale de Coverley DMW. Exercise dependence. *Br J Addict* 1987; **82**: 735-40.